

We claim:

1. A method of marking a solid article or substance, comprising the following steps:
 - dissolving a water-insoluble medium in a first solvent to form a first mixture;
 - mixing a nucleic acid solution with an intermediate solution to form a second mixture;
 - mixing the second mixture with the first mixture to form a homogenous third mixture;
 - marking the article or substance with the third mixture containing said nucleic acid; and
 - drying the labeled article or substance;
 - wherein the medium is an inert medium and is not deteriorative to the article or substance, and
 - wherein the intermediate solution increases the miscibility between the first mixture and the second mixture.
2. The method as claimed in claim 1, wherein the water-insoluble medium is a polymeric substance.
3. The method as claimed in claim 2, wherein the polymeric substance is selected from a group consisting of polycarbonate (PC), polymethyl methacrylate (PMMA), polystyrene (PS), and polypropylene (PP).
4. The method as claimed in claim 1, wherein the first solvent is a non-polar solvent.
5. The method as claimed in claim 4, wherein the non-polar solvent is selected from a group consisting of chloroform, dichloromethane, xylene and toluene.
6. The method as claimed in claim 1, wherein the intermediate solution is a semi-polar solvent.
7. The method as claimed in claim 6, wherein the intermediate solution is selected from a group consisting of methanol, ethanol, acetone, glycerol and their mixture.

- 8.** The method as claimed in claim **1**, wherein the nucleic acid is selected from a group consisting of a natural and a synthetic nucleic acid.
- 9.** The method as claimed in claim **8**, wherein the synthetic nucleic acid is a synthetic vector.
- 10.** The method as claimed in claim **8**, wherein the synthetic nucleic acid is a nucleic acid fragment.
- 11.** A method of marking a water insoluble liquid, comprising the following steps:
 - dissolving a nucleic acid in a aqueous solution to form a first mixture;
 - mixing the first mixture with an intermediate solution to form a second mixture;
 - mixing the second mixture with a water insoluble solvent to form a homogenous third mixture; and
 - mixing and marking the liquid with the third mixture;
 - wherein the intermediate solution increases the miscibility between the second mixture and the water insoluble solvent.
- 12.** The method as claimed in claim **11**, wherein the water insoluble solvent is a non-polar solvent.
- 13.** The method as claimed in claim **12**, wherein the non-polar solvent is selected from a group consisting of chloroform, dichloromethane, xylene and toluene.
- 14.** The method as claimed in claim **11**, wherein the intermediate solution is a semi-polar solvent.
- 15.** The method as claimed in claim **14**, wherein the intermediate solution is selected from a group consisting of methanol, ethanol, acetone, glycerol and their mixture.
- 16.** The method as claimed in claim **11**, wherein the nucleic acid is selected from a group consisting of a natural and a synthetic nucleic acid.
- 17.** The method as claimed in claim **16**, wherein the synthetic nucleic acid

comprises a synthetic vector.

18. The method as claimed in claim 16, wherein the synthetic nucleic acid comprises a nucleic acid fragment.